**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (withdrawn-currently amended) A transistor for active matrix display comprising a microcrystalline silicon film [[(5)]] and an insulator [[(3)]], the crystalline fraction being above 80%, wherein it comprises a plasma treated interface [[(4)]] located between the insulator [[(3)]] and the microcrystalline silicon film [[(5)]] so that the said transistor [[(1)]] has a linear mobility equal or superior to 1.5 cm2W1s~1, shows threshold voltage stability and wherein the microcrystalline silicon film [[(5)]] comprises grains [[(6)]] whose size ranges between 10 nm and 400 nm.

2. (withdrawn) A transistor for active matrix display according to claim 1, wherein said grain size ranges between 100 nm and 200 nm.

3. (withdrawn-currently amended) A transistor for active matrix display according to claim 1, wherein the microcrystalline silicon film [[(5)]] thickness is comprised between 100 nm and 450 nm.

4. (withdrawn-currently amended) A transistor for active matrix display according to claim 1, wherein said transistor [[(1)]] has a top-gate electrode.

5. (withdrawn-currently amended) A transistor for active matrix display according to claim 1 wherein said transistor [[(1)]] has a bottom-gate electrode.

6. (withdrawn-currently amended) A display unit having a line-column matrix of pixels that are actively addressed, wherein each pixel comprises at least a transistor [[(1)]] according to claim 1.

7. (withdrawn) A display unit according to claim 6, wherein said pixels comprise light emissive organic materials.

8. (withdrawn) A display unit according to claim 6, wherein said pixels comprise liquid crystals.

9. (withdrawn) A display unit according to claim 6, wherein said pixels comprise light emissive polymer materials.

10. (withdrawn) A display unit according to claim 6, wherein electronic control means to drive each pixel are at least

partially integrated on the corresponding microcrystalline silicon film.

11. (currently amended) A method for producing a transistor for active matrix display comprising the steps of:

forming an active material and electrodes on a substrate, said active material being formed using a vapor deposition ~~methods~~ method; and ~~said transistor comprising~~

forming an insulator on top of said active material and electrodes, wherein,

a plasma treated interface is formed on top of said insulator, [[and]]

a microcrystalline film is formed on top of said treated interface at a temperature comprised between 100 and 400°C using at least a deposition chemical element and a crystallisation chemical element wherein [[the]] said microcrystalline silicon film comprises a crystalline fraction ~~being~~ of above 80% and said microcrystalline silicon film comprises grains of a size between 10 nm and 400 nm, and

said plasma treated interface is selected from the group consisting of a $SiN_x$ layer, a $SiN_xO_y$ layer, a $SiO_2$ layer and glass, and

plasma treated interface is formed using a gas selected from the group consisting of $N_2$, $O_2$, $N_2O$ and $NH_3$.

12-13. (cancelled)

14. (previously presented) The method for producing a transistor according to claim 11, wherein the microcrystalline silicon film is formed using a buffer gas selected from the group consisting of Ar, Xe, Kr and He.

15. (currently amended) The method for producing a transistor according to claim 11, wherein said crystallisation chemical elements is [[H2]] $H_2$.

16. (currently amended) The method for producing a transistor according to claim 11, wherein said deposition chemical elements are selected from the group consisting of $SiH_4$ and $SiF_4$ ~~SiH4 and SiF4~~.

17. (currently amended) The method for producing a transistor according to claim 11, wherein said deposition chemical elements generate a flux and said crystallisation chemical elements generate a flux, both of which are at equilibrium during the growth of the microcrystalline silicon film.

18. (currently amended) The method for producing a transistor according to claim 11, wherein ~~one forms~~ a top gate transistor is formed.

19. (currently amended) The method for producing a transistor according to claim 18, wherein ~~one patterns~~ the substrate comprising a metallic layer is patterned to form source and drain electrodes.

20. (withdrawn) A method for producing a transistor according to claim 11, wherein one forms a bottom gate transistor.

21. (withdrawn) A method for producing a transistor according to claim 20, wherein the substrate comprises a gate electrode.

22. (cancelled)

23. (previously presented) The method for producing a transistor according to claim 11, wherein the microcrystalline silicon film thickness is comprised between 100 nm and 450 nm.

24. (currently amended) The A method for producing a transistor according to claim 11, wherein the microcrystalline silicon film is produced by a hot wire technique.

25. (currently amended) The method for producing a transistor according to claim 11, wherein the microscrystalline silicon film is produced by a radiofrequency[[,]] glow discharge technique.

26. (currently amended) The method for producing a transistor according to claim 11, wherein the vapor deposition methods use a radiofrequency glow discharge technique.

27. (previously presented) The method for producing a transistor according to claim 26, wherein the vapor deposition methods uses a 13.56 MHz PECVD reactor.